

AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

1. (currently amended) A dry gray-scale image processor which extracts unexposed films one by one and carries them to an exposure unit, radiates a laser beam according to an image data signal onto the film as it passes said exposure unit, and develops the exposed film by heating it at a heating unit, wherein

an interval between an exposure position of said exposure unit and a heat start position of said heating unit is shorter than the length of the film in the delivery direction, and the exposure process and heating process are performed in parallel simultaneously,

said heating unit comprises a film passage, provided between heating blocks which are arranged on either side of said film, and

said film passage comprises two fluororesin coated opposing surfaces having a constant width therebetween, and

a film supply cassette in which said unexposed films are stored and a film collection tray in which said exposed films are stored are provided on opposite sides of two ends of an U-shaped carrying path, and the processes of exposure and heating are performed on a curved bottom face of the U-shaped carrying path.

2. (cancelled)

3. (original) A dry gray-scale image processor as described in claim 1, wherein said heating unit is set so that the temperature distribution along the width of said film and the heating distance along the delivery direction of said film are uniform.

4. (cancelled)

5. (original) A dry gray-scale image processor as described in claim 1, wherein said film passage has a large curvature with respect to the emulsion face side of said film.

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6. (cancelled)

7. (original) A dry gray-scale image processor as described in claim 3, wherein said film passage has a large curvature with respect to the emulsion face side of said film.

8-12. (cancelled)

13. (original) A dry gray-scale image processor as described in claim 1, wherein a density level detecting unit is provided near the exit of said heating unit, and said exposure unit is controlled by feedback.

14. (cancelled)

15. (original) A dry gray-scale image processor as described in claim 3, wherein a density level detecting unit is provided near the exit of said heating unit, and said exposure unit is controlled by feedback.

16. (cancelled)

17. (original) A dry gray-scale image processor as described in claim 5, wherein a density level detecting unit is provided near the exit of said heating unit, and said exposure unit is controlled by feedback.

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18. (cancelled)

19. (original) A dry gray-scale image processor as described in claim 7, wherein a density level detecting unit is provided near the exit of said heating unit, and said exposure unit is controlled by feedback.

20-24. (cancelled)

25. (currently amended) A dry gray-scale image processor as described in any one of claims 1, 3, 5, 7, 13, 15, 17, and 19, wherein a cooling region is provided at the exit of said heating unit, and flatness regain rollers are provided after the cooling region,

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and said cooling region is a space which has a predetermined length along a carrying direction of said exposed film.

26. (new) A dry gray-scale image processor which extracts unexposed films one by one and carries them to an exposure unit, radiates a laser beam comprising an image data signal onto the film as it passes said exposure unit, and develops the exposed film by heating it at a heating unit, wherein

an interval between an exposure position of said exposure unit and a heat start position of said heating unit is shorter than the length of the film in the delivery direction and the exposure process and heating process are performed in parallel simultaneously, and

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a film supply cassette in which said unexposed films are stored and a film collection tray in which said exposed films are stored are provided on opposite sides of two ends of an U-shaped carrying path, and the processes of exposure and heating are performed on a curved bottom face of the U-shaped carrying path.

27. (new) A dry gray-scale image processor as described in claim 26, wherein said heating unit comprises a film passage, provided between heating blocks which are arranged on either side of said film.

28. (new) A dry gray-scale image processor as described in claim 26, wherein said heating unit is set so that the temperature distribution along the width of said film and the heating distance along the delivery direction of said film are uniform.

29. (new) A dry gray-scale image processor as described in claim 26, wherein said film passage has a large curvature with respect to the emulsion face side of said film.

30. (new) A dry gray-scale image processor as described in claim 26, wherein the film passage comprises two fluororesin coated opposing faces having a constant width therebetween.

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31. (new) A dry gray-scale image processor as described in claim 26, wherein a density level detecting unit is provided near the exit of said heating unit, and said exposure unit is controlled by feedback.

32. (new) A dry gray-scale image processor as described in any one of claims 26-31, wherein a cooling region is provided at the exit of said heating unit and flatness regain rollers are provided after the cooling region.

33. (new) A dry gray-scale image processor as described in claim 28, wherein the temperature distribution of said heating unit along the width of said film is kept constant by adjusting the intensity of a heater element of said heating unit in such a manner that the intensity of the heater element in the center along the width of said film is higher than two ends.

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34. (new) A dry gray-scale image processor as described in claim 33, wherein the intensity of the heater element is adjusted by changing the number of windings of the heater element around an axis of said heating unit.
